

# **DRAFT**

# **Huckleberry Ridge Conservation Area**

## **Ten Year Area Management Plan**

### **FY 2015-2024**



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## OVERVIEW

- **Official Area Name:** Huckleberry Ridge Conservation Area, # 6314
- **Year of Initial Acquisition:** 1961
- **Acreage:** Approximately 2,106 acres
- **County:** McDonald
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**

### A. Strategic Direction

Manage for healthy forest and woodland natural communities, the species they support, and compatible recreational opportunities. Emphasis will be placed on demonstrating management practices that will benefit natural communities found on the area and the species they support. Special emphasis will be placed on wild turkey and small upland game. The conservation area provides hunting, trapping, hiking, nature viewing and outdoor education opportunities. Other public uses, such as camping, bike riding and horseback riding are supported, insofar as they do not impede or conflict with natural resource quality, area management or historic uses.

### B. Desired Future Condition

The desired future condition of Huckleberry Ridge Conservation Area (CA) is for sustainable forest and woodland natural communities.

### C. Federal Aid Statement

This area, or a portion thereof, was acquired with Land and Water Conservation Fund dollars to provide land or facilities for public outdoor recreation.

## GENERAL INFORMATION AND CONDITIONS

### I. Special Considerations

- A. **Priority Areas:** Elk River Hills Priority Forest Landscape, Big Sugar Creek Conservation Opportunity Area
- B. **Natural Areas:** None

### II. Important Natural Features and Resources

- A. **Species of Conservation Concern:** Species of conservation concern are known from this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.
- B. **Caves:** Yes, records kept with the Missouri Department of Conservation (the Department) Natural History Biologist. Managers should follow the Cave Management policy found in the Department's Resource Policy Manual. All caves on this and other Conservation Areas are closed or restricted to public

access. The fungus that causes White-nose Syndrome in bats has been documented in Missouri, resulting in the Department's White-nose Syndrome Action Plan that limits public access to protect bats.

**C. Springs:** None

**III. Existing Infrastructure**

- 13 parking lots
- 17.3 miles of multi-use trails
- 7 primitive campground sites
- 7 fishless ponds (small waterholes)
- 4 miles of ungated interior road

**IV. Area Restrictions or Limitations**

**A. Deed Restrictions or Ownership Considerations:** None

**B. Federal Interest:** This land must provide land/facilities for public outdoor recreation in perpetuity. Federal funds may also be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.

**C. Easements:** New Mac Electric buried power line (July 5, 1984; T22N, R31W, Sect. 31; 20' x 446'), KAMO Electric Cooperative power line (June 29, 1979; T22N, R32W, Sect. 25; 50' each side of centerline and 1,364' long)

**D. Cultural Resources Findings:** No known cultural resources.

**E. Hazards and Hazardous Materials:** None observed.

**F. Endangered Species:** None observed.

**G. Boundary Issues:** Establishing accurate and identifiable boundary markers is a priority for this property.

**MANAGEMENT CONSIDERATIONS**

**V. Terrestrial Resource Management Considerations**

Huckleberry Ridge CA is comprised of mixed oak-hickory woodlands and pine-oak woodlands. Thinning and application of limited prescribed fire will reduce tree density, increase ground flora cover and diversity and provide quality brood-rearing habitat for turkey as well as food and habitat for numerous other species.

Dry ridge tops and south-facing slopes on the area can produce abundant early successional habitat vital for turkey, deer and small predators (bobcat and gray fox).

Scattered sprouts and clumps of Ozark chinquapin are present and need access to full sunlight to reduce competitive stress from adjacent trees.

**Challenges and Opportunities:**

- 1) Managing the woodland community.
- 2) Maintaining and enhancing the forest, woodland and upland habitat to promote better wildlife habitat.
- 3) Protecting karst features.
- 4) Identifying and controlling invasive and exotic species.

**Management Objective 1:** Manage the forest and woodlands to ensure natural community health and diversity and to provide sustainable forest products.

**Strategy 1:** Conduct an inventory within forest/woodland compartments on a 15-year rotation to develop prescriptions for ecological and forest management treatments. (Forestry)

**Strategy 2:** Maintain a diversity of tree age classes that will provide both a diversity of wildlife habitat as well as resiliency to biotic and abiotic damaging agents. (Forestry)

**Strategy 3:** Restore and manage forest and woodland communities by using timber harvesting, timber stand improvement, firewood cutting, salvage cuttings and prescribed burns, as needed. (Forestry)

**Strategy 4:** Utilize best management practices during timber harvests as described in the Department's *Missouri Watershed Protection Practice* manual (2014) and the *Missouri Woody Biomass Harvesting Best Management Practices Manual* (Enyart, 2009). (Forestry)

**Strategy 5:** Consider aesthetic aspects of timber management operations in high visibility areas along roads and trails. (Forestry)

**Strategy 6:** Allow low-valued wood to be utilized as fuel wood by local homeowners. (Forestry)

**Strategy 7:** Control wildfires to minimize damage to forest resources. (Forestry)

**Strategy 8:** Protect known Ozark chinquapins from mechanical damage and reduce competing vegetation during management activities. (Forestry)

**Management Objective 2:** Protect karst features.

**Strategy 1:** Provide a 150 foot buffer around all cave entrances, sinkholes, springs and fens to protect from disturbance. (Wildlife/Forestry)

**Strategy 2:** Regularly monitor cave entrance for litter and graffiti. (Wildlife/Forestry)

**Management Objective 3:** Maintain and enhance forest, woodland and upland habitat, specifically targeting nesting and brood-rearing habitat for wild turkey.

**Strategy 1:** Utilize timely prescribed fire on woodland sites to reduce under and mid-story canopy cover and to promote herbaceous ground flora development. (Forestry/Wildlife)

**Strategy 2:** Utilize commercial harvesting and/or pre-commercial thinning to reduce canopy closure. (Forestry/Wildlife)

**Strategy 3:** Implement edge feathering around wildlife openings/food plots. (Forestry/Wildlife)

**Strategy 4:** Hinge cut cedars in old fields for living brush piles. (Forestry/Wildlife)

**Strategy 5:** Establish and maintain legumes and cool-season grasses in forest openings and old field sites. (Forestry/Wildlife)

**Management Objective 4:** Reduce invasive and exotic species to improve wildlife habitat.

**Strategy 1:** Assess exotic and invasive species. (Wildlife/Forestry)

**Strategy 2:** Manage exotic and/or invasive native species using chemical, mechanical, and biological methods. (Wildlife/Forestry)

**Management Objective 5:** Promote early successional habitat in suitable areas.

**Strategy 1:** Apply prescribed fire on ridge tops and south-facing slopes to promote early successional habitats. (Wildlife/Forestry)

**Strategy 2:** Establish permanent forest openings for green browse food plots. (Wildlife/Forestry)

**Management Objective 6:** Restore and manage glade natural communities.

**Strategy 1:** Use chemical and/or mechanical methods to reduce woody encroachment on glades. (Wildlife/Forestry)

**Strategy 2:** Use prescribed fire to restore and maintain glades (two to three year rotation initially, then up to five years during maintenance phase). (Wildlife/Forestry)

## **VI. Aquatic Resource Management Considerations**

### **Challenges and Opportunities:**

- 1) Permanent water on the area is limited to seven small ponds associated with forest openings. The relatively high relief in the area requires that the wet weather streams convey a substantial amount of runoff after heavy rainfall events. The

soils on the area are not suitable for lake construction, leaving little potential for developing a recreational fishery.

**Management Objective 1:** Protect and enhance the aquatic features used by amphibians, reptiles and other wildlife species.

**Strategy 1:** Remove woody vegetation from all wildlife watering/amphibian and reptile impoundment dams. (Fisheries/Forestry/Wildlife)

**Strategy 2:** Add limbs and brush from non-coniferous species along the perimeter of existing ephemeral ponds to provide cover and egg deposition areas for amphibians and reptiles. (Fisheries/Forestry/Wildlife)

**Strategy 3:** Inventory ponds for amphibian and reptile species. (Fisheries/Forestry/Wildlife)

**Management Objective 2:** Evaluate and expand riparian corridors, as needed, to a width of at least 100 feet on both sides of all third-order and larger streams, where possible.

**Strategy 1:** Enhance riparian corridors by allowing natural regeneration or by planting suitable native woody vegetation in areas with riparian corridors less than 100 feet. Exotic and invasive species should be managed under current invasive species policies. (Forestry/Fisheries/Wildlife)

**Strategy 2:** Ensure survival of riparian plantings by controlling competing vegetation with mechanical and chemical methods within the corridor. (Forestry/Fisheries/Wildlife)

**Strategy 3:** Implement best management practices on all area streams. (Forestry/Fisheries/Wildlife)

**Management Objective 3:** Enhance or expand the riparian corridors of first- and second-order streams to a minimum of 50 feet on both stream sides.

**Strategy 1:** Allow natural regeneration to vegetate the riparian corridors or plant trees and shrubs within the corridors where natural regeneration is not likely to succeed. (Forestry/Fisheries/Wildlife)

**Management Objective 4:** Implement appropriate watershed best management practices on all Department managed areas.

**Strategy 1:** Implement State Forest Management guidelines during all forest management activities. (Forestry/Fisheries/Wildlife)

**Strategy 2:** Manage roads and trails utilizing appropriate best management practices to minimize runoff and sedimentation into streams. (Forestry/Fisheries/Wildlife)

## **VII. Public Use Management Considerations**

### **Challenges and Opportunities:**

- 1) Recreational use of the area is typical of that compatible with heavily-forested areas. The area receives moderate to heavy use during firearms deer season and light to moderate use during spring turkey season. Otherwise, hunting activity on the area is light.
- 2) The area is used by horseback and bicycle riders.
- 3) Trail use by horseback riders and others is increasing with limited trail maintenance occurring. Erosion potential is high due to steep grades.
- 4) Since 1996, the area has been the site of a Boy Scout camping event.
- 5) Educational opportunities exist for private landowners to implement forest and wildlife habitat management practices on their land, and to expand the habitat work on adjoining and nearby private landowner property, resulting in a larger landscape of quality woodland habitat.

### **Management Objective 1:** Provide for safe and sustainable public use.

**Strategy 1:** Map all designated and non-designated trails currently being used by the public. (Forestry)

**Strategy 2:** Determine if any existing trails negatively impact natural resources, or pose a safety hazard. Close any such trails. (Forestry/Protection)

**Strategy 3:** Designate trails that will be open for public use and maintain an area trail map. Monitor and close unauthorized trails. (Forestry/Outreach and Education)

### **Management Objective 2:** Cooperatively patrol the area and report unauthorized activities.

**Strategy 1:** Engage regular users and neighbors to help assess the type and amount of public use occurring on the area. (Forestry/Protection)

**Strategy 2:** Utilize law enforcement agreements with McDonald County Sheriff's Offices to maintain a supplemental and periodic enforcement presence on the area. (Protection/Forestry)

**Strategy 3:** Post and maintain signboards with information regarding authorized public uses of the area. (Forestry)

### **Management Objective 3:** Encourage volunteer/community service groups to provide resource and conservation area stewardship.

**Strategy 1:** Contact horseback riders to determine specific saddle clubs using the area and solicit their help in trail maintenance. (Forestry/Wildlife/Protection)

**Strategy 2:** Continue relationships in nearby communities with scout troops that may be interested in cleanups, plantings and other stewardship projects at the area. (Forestry/Wildlife/Protection/Fisheries)

**Management Objective 4:** Provide recreational opportunities for hunting, trapping, wildlife observation, natural resource education and primitive camping.

**Strategy 1:** Maintain open ridge-top areas for primitive camping opportunities. (Forestry)

**Strategy 2:** Install signage where significant management activities have occurred to better inform area users about resource management activities. (Forestry)

**Management Objective 5:** Improve adjoining private landowner relationships and awareness of conservation activities on the area.

**Strategy 1:** Conduct outreach to neighboring landowners, showcasing natural resource management work on the area. (Forestry/Fisheries/Wildlife/Outreach and Education/Private Land Services)

**Strategy 2:** Provide education and cost-share opportunities to adjoining landowners that wish to become engaged in land management activities. (Forestry/Fisheries/Wildlife/Outreach and Education/Private Land Services)

## VIII. Administrative Considerations

### **Challenges and Opportunities:**

- 1) Maintaining area infrastructure at current levels.
- 2) Maintaining clearly identified property boundaries.
- 3) Lands proposed for acquisition.

**Management Objective 1:** Maintain area infrastructure at current levels.

**Strategy 1:** Maintain area infrastructure in accordance with Department guidelines and at currently identified maintenance level (1). (Forestry)

**Management Objective 2:** Maintain clearly identified property boundaries.

**Strategy 1:** Paint boundaries on a five to seven year cycle with standard blue boundary marking paint. (Forestry)

**Strategy 2:** In appropriate high-use areas, maintain signage that informs the public of “End of Public Use Area.” (Forestry)

**Strategy 3:** Work with Department staff to determine if boundary lines need to be resurveyed and adjusted. (Forestry)



**Lands proposed for acquisition:**

When available, adjacent land may be considered for acquisition from willing sellers. Tracts that improve area access, provide public use opportunities, contain unique natural communities and/or species of conservation concern, or meet other Department priorities, as identified in the annual Department land acquisition priorities, may be considered.

**MANAGEMENT TIMETABLE**

Strategies are considered ongoing unless listed in the following table:

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
<b>Terrestrial Resource Management</b>										
Objective 1										
Strategy 1				X					X	
Objective 3										
Strategy 1				X					X	
Strategy 2			X					X		
Strategy 3		X					X			
Strategy 4	X					X				
Objective 5										
Strategy 1		X			X			X		
Strategy 2				X					X	
Objective 6										
Strategy 1		X				X				
Strategy 2	X			X			X			
<b>Aquatic Resource Management</b>										
Objective 1										
Strategy 1		X			X			X		
Strategy 2		X			X			X		
Strategy 3		X			X			X		
Objective 2										
Strategy 1				X					X	
Strategy 2				X					X	
Objective 3										
Strategy 1		X			X			X		
<b>Public Use Management</b>										
Objective 3										
Strategy 1		X		X		X		X		
Strategy 2	X		X		X		X		X	

	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>
Objective 4										
Strategy 2		X			X			X		
Objective 5										
Strategy 1		X			X			X		
<b>Administrative Considerations</b>										
Objective 2										
Strategy 1					X					
Strategy 2			X					X		

## APPENDICES

### Area Background:

The area was settled in the 1830s. Most of the original forest was heavily cut and burned, and livestock were left free to roam the hills. This area is on the northwest fringe of the range for native shortleaf pine and historically, pine was more abundant locally. Pineville, about 5 miles west of the area, was named for this once common tree. The area was named for the huckleberry, a type of wild blueberry found in association with pine forests. The area was sparsely settled due to the limited amount of arable land suitable for row crops. Widespread burning of the forested areas continued throughout the 1960s, but has declined to the point that wildfires only occasionally occur. This was the first large forested tract purchased by the Department in Southwest Missouri. A wildfire caused by an unextinguished campfire April 16, 1989 resulted in mortality to forest stands in the eastern half of Section 25 and subsequent regeneration.

According to the *Atlas of Missouri Ecoregions* (Nigh & Schroeder, 2002): Huckleberry Ridge CA is located in the center of McDonald County. Ecologically this conservation area is located in the Big Sugar Creek Oak Woodland/Forest Hills Land Type Association, within the Elk River Hills Subsection of the Ozark Highlands Ecological Section. Topography on the area is characterized by steep slopes, narrow ridges and narrow valley bottoms. Soils were formed from parent material of cherty limestone. Vegetation is composed oak-hickory woodlands, pine-oak woodlands, with occasional small glades and talus barrens supporting stunted timber and well developed shrubs and grasses. Naturally occurring water is limited. The area south of Highway K drains into Little Sugar Creek while that north of the highway drains into Big Sugar Creek. About 2 miles west of the area Big Sugar Creek and Little Sugar Creek join to become the Elk River, flowing west into Grand Lake of the Cherokees in Oklahoma. Specific natural communities found on the area:

- 377 acres: Ultic Chert Upland Mixed Oak Woodlands
- 366 acres: Ultic Chert Upland Pine-oak Woodlands
- 657 acres: Alfic Chert Exposed Backslope Woodlands
- 621 acres: Alfic Chert Protected Backslope Forests
- 44 acres: Dry-Mesic Foothill/High Terrace Forests
- <1 acres: Sandy/Gravelly Low Floodplain Forests

Acquisition History:

Year	Acres	Name
1961	160	Kosharek tract
1961	1183	Miller tract
1962	200	Flynt tract
1962	40	DeWitt tract
1964	123.34	Hafner tract
1964	80	Bailey tract
1964	40	Davenport tract
1966	40	Lammers tract
1966	40	Lampo tract
1982	-0.16	Stout tract
1984	160	Roach tract
1990	40	Olsen/Dworak tract

Total: 2,106.18

Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Woodland	1,437.68		68
Upland Forest	621		29
Bottomland Forest	44		2
Oldfield/grassland	3		<1
Impounded Water	0.5		<1
<b>Total</b>	<b>2,106.18</b>		<b>100</b>
Stream Frontage		14.21	

References:

Enyart, D. (2009). *Missouri woody biomass harvesting: Best management practices manual*. Missouri Department of Conservation: Jefferson City, Missouri.

Missouri Department of Conservation. (2014). *Missouri watershed protection practice recommended practices for Missouri forests: 2014 management guidelines for maintaining forested watersheds to protect streams*. Conservation Commission of the State of Missouri: Jefferson City, Missouri.

Nigh, T. A., & Schroeder, W. A. (2002). *Atlas of Missouri ecoregions*. Jefferson City, Missouri: Missouri Department of Conservation.

**Maps:**

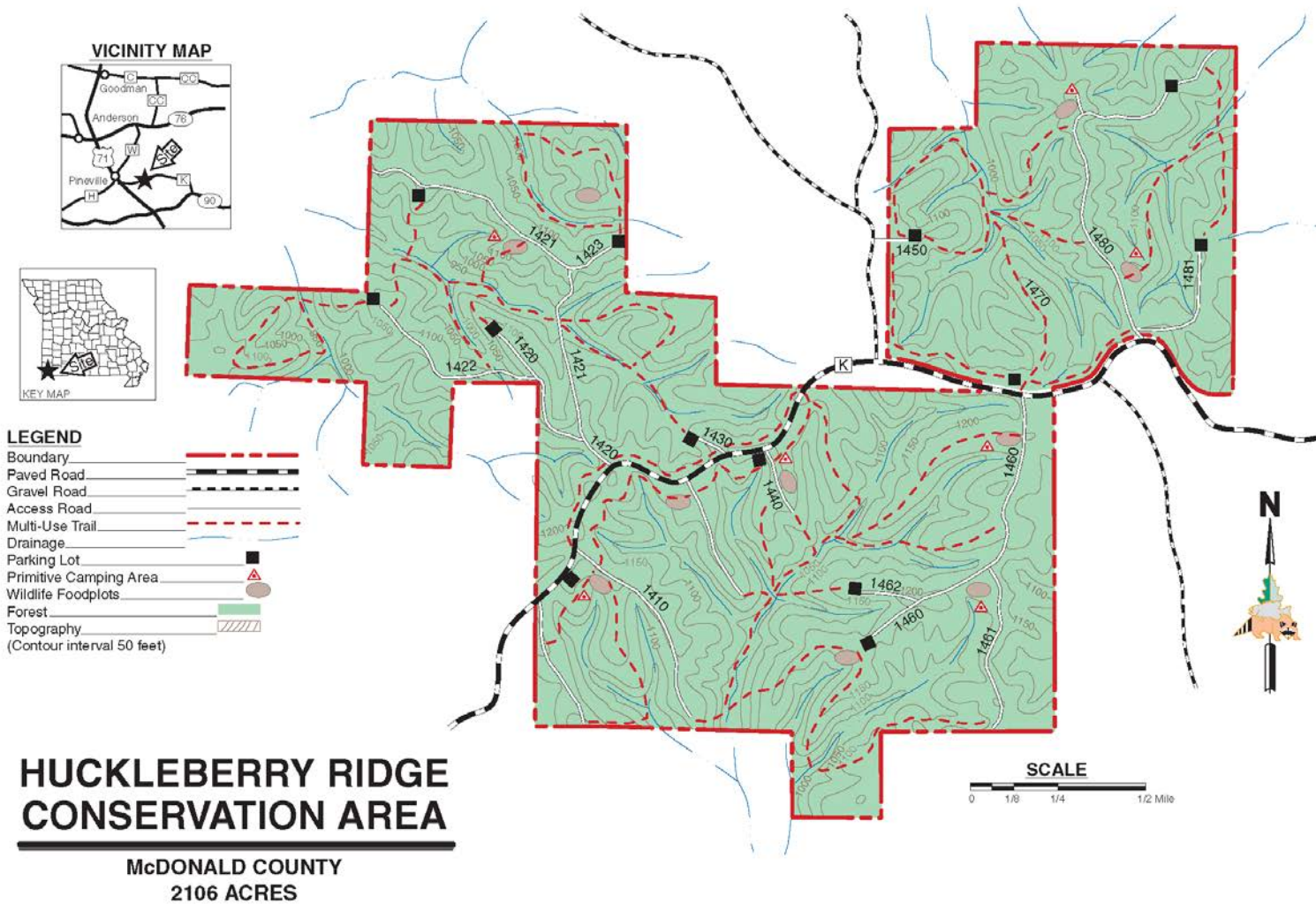
Figure 1: Area Map

Figure 2: Forest Compartment Map

Figure 3: Proximity Map

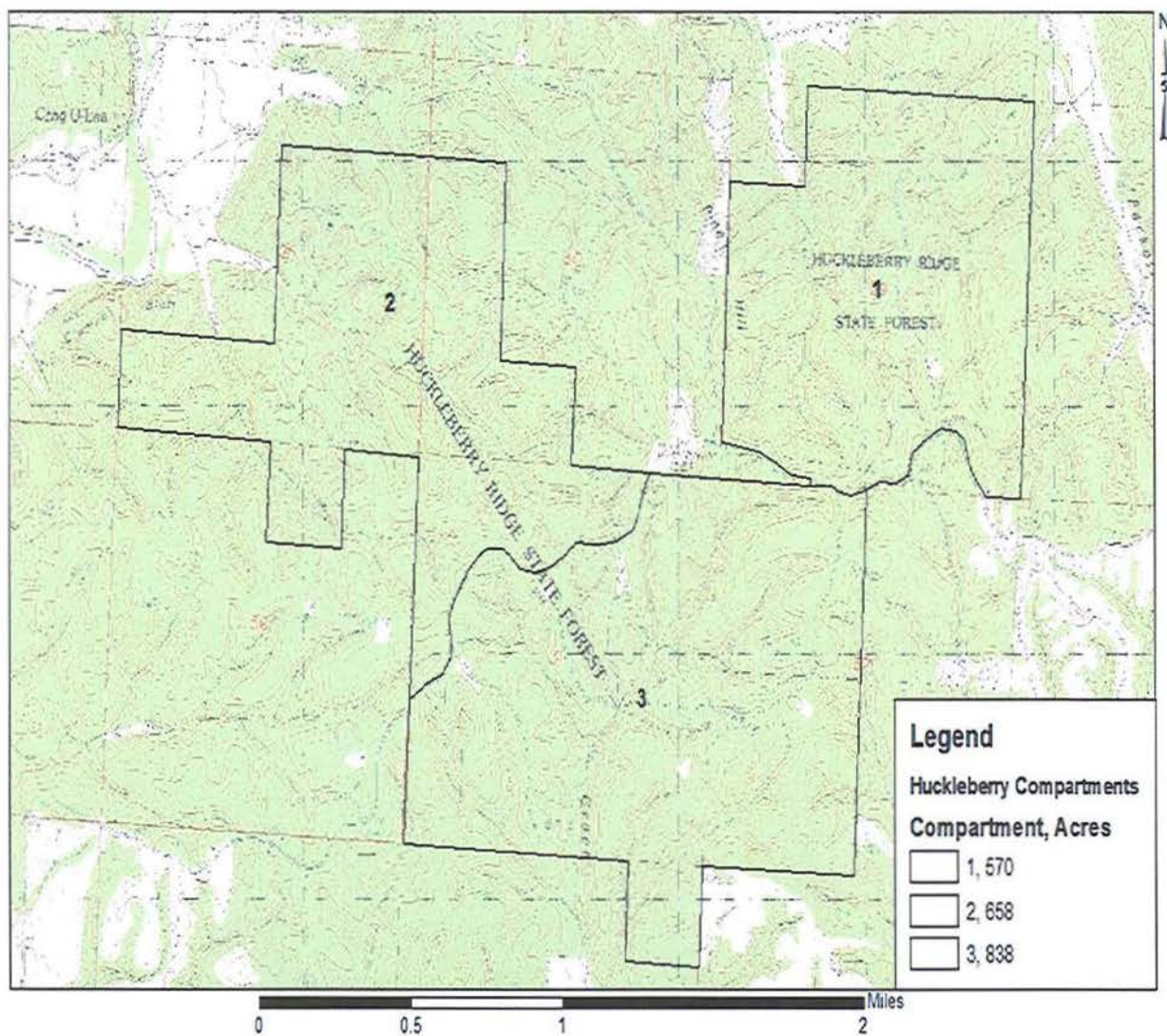
Figure 4: Ecological Land Type Map

**Figure 1: Area Map**



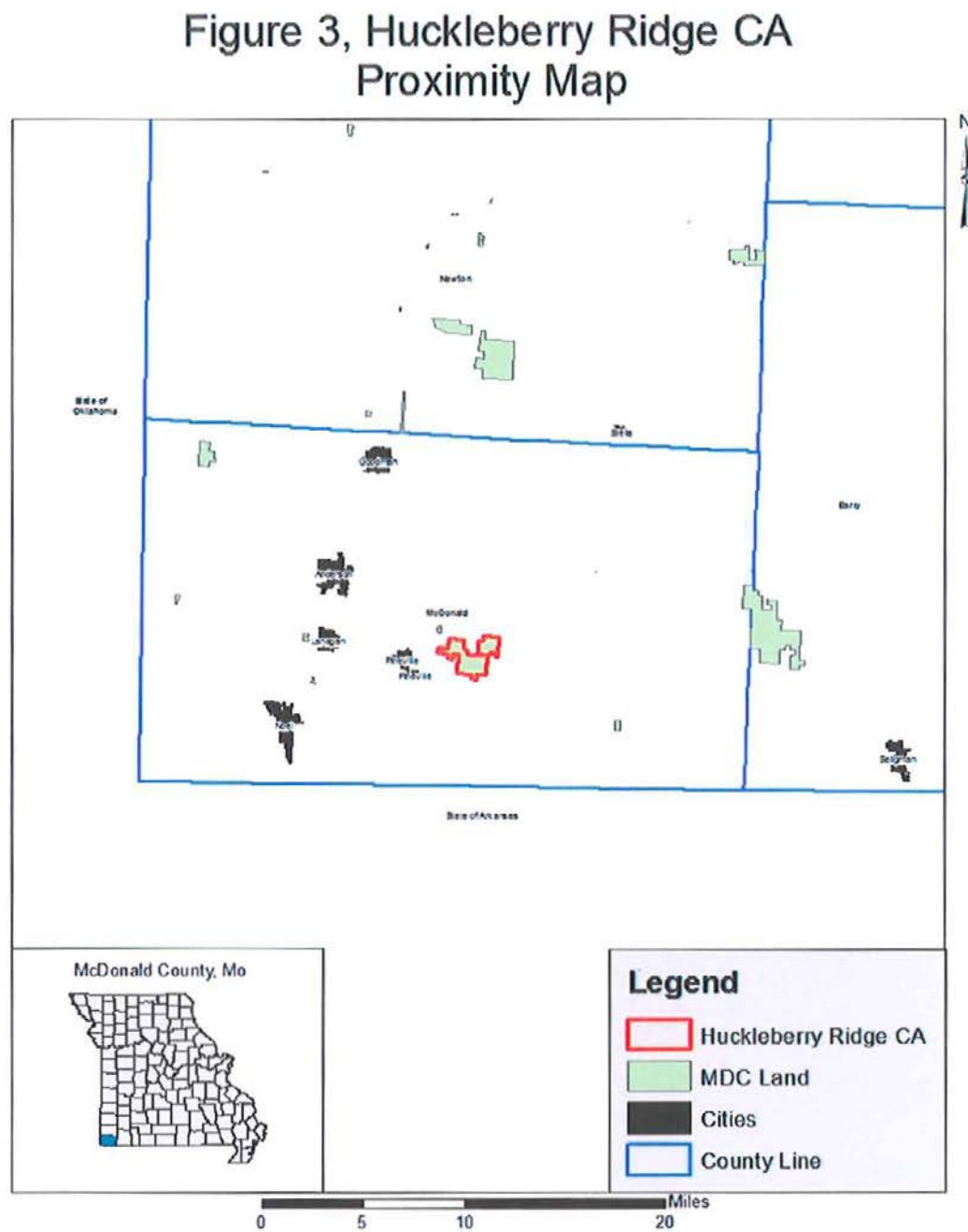
**Figure 2: Forest Compartment Map**

**Figure 2, Huckleberry Ridge CA,  
Forest Compartment Map**



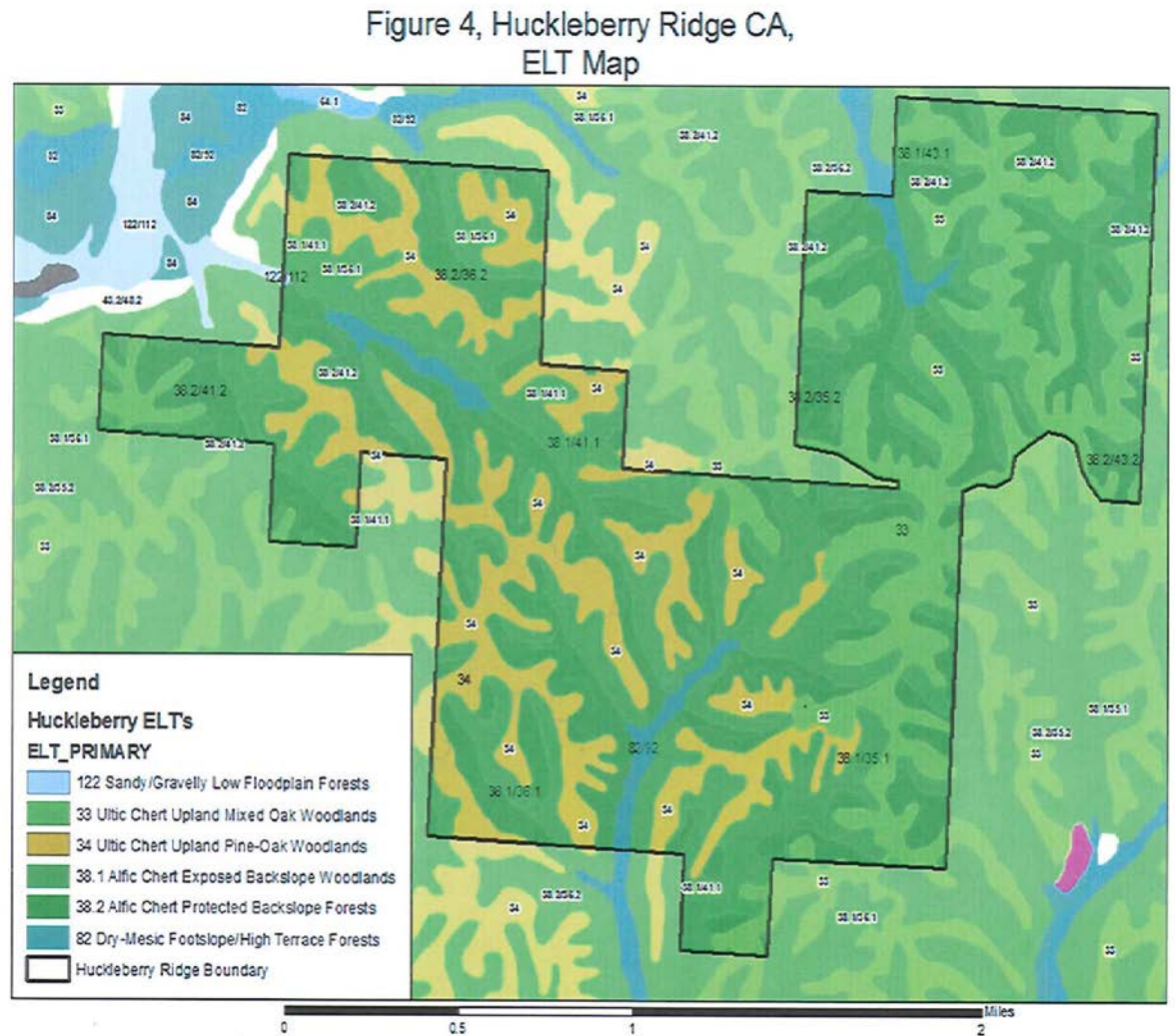


**Figure 3: Proximity Map**





**Figure 4: Ecological Land Type Map**



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